

## REMARKS

This response is in reply to the Office Action dated February 2, 2006.

Claims 1, 2, 5-7, 9-12 and 21-25 are pending and under consideration.

Claims 1, 2, 5-7, 9-12 and 21-25 stand rejected under 35 U.S.C. § 103(a) as allegedly being obvious over Chee *et al.* (U.S. Pre-grant Publication 2002/0132221) in view of Collins *et al.* (U.S. Patent 5,681,702). Applicants respectfully traverse the rejection.

Chee *et al.* describes how beads can be “decoded” for the presence of an attached bioactive agent by using a decoding binding ligand (DBL) that binds to an identifier binding ligand (IBL) associated with a given bead. The Patent Office states that “[t]he ordinary artisan would have been motivated to provide optimal specificity for the DBL-IBL method of Chee because Chee teaches that the DBL-IBL nucleic acid pairs should be specific for each other. The ordinary artisan would have been motivated to optimize specificity of the DBL-IBL nucleic acid pairs of Chee with orthogonal nucleobases as used by Collins, because Collins specifically teaches that these nucleobases can be used to reduce non-specific binding and hybridization in nucleic acid hybridization assays.” *See* page 4, Office Action mailed February 2, 2006. Applicants respectfully disagree and, for reasons explained in their Response dated December 21, 2005, maintain that the Patent Office has not demonstrated why one of skill in the art would be motivated to optimize specificity of the system in Chee *et al.* that appears to be already highly specific without modifications. Indeed, by using orthogonal nucleobases, one of skill might arrive at probes that are too specific for the methods of Chee *et al.*

The Patent Office states that Applicants’ response provides no explanation of how the IBL-DBL pairs of Chee *et al.* could be “too specific” and that it is unclear how probes could be too specific. *See* page 7, Office Action mailed February 2, 2006. Chee *et al.*, however, provides an example where highly specific probes would not be helpful. In one embodiment, probes “that bind in a sequence-dependent but not highly sequence-specific manner” are used to decode cloned nucleic acids. *See* para. 0122, Chee *et al.* Elsewhere, Chee *et al.* discusses the importance of having specific probes, that is, to distinguish between different IBL-DBL pairs, but that also allow dissociation, if necessary, under suitable experimental conditions and efficient hybridization, where optimization of specificity can be achieved by altering probe length. *See* para. 0069, Chee *et al.* Hence, achieving higher specificity is not synonymous to optimizing specificity in Chee *et al.* The specificity of the system in Chee *et al.* appears already optimized without need for modifications.

In fact, the specification of Chee *et al.* abounds in embodiments of how to expand the “set” of decoding molecules, for example, by incorporating optical signatures on the beads being probed (paras. 0073 and 0074) and by using sequential runs with different labels on the probes (paras. 0105 and 0106). Nonetheless, Chee *et al.* does not teach or suggest the use of orthogonal nucleobases in coding or decoding oligonucleotides, even though such nucleobases are discussed elsewhere in the reference.

Collins *et al.* describes the use of orthogonal nucleobases to reduce nonspecific binding and nonspecific hybridization in hybridization assays. Collins *et al.* does not teach or suggest the use of orthogonal nucleobases in a method of identifying a coded test unit in a plurality of coded test as in instant Claim 1. Collins *et al.* does not even discuss coding or decoding oligonucleotides. Even so, the specificity of the system in Chee *et al.* appears to be already optimized without need for reducing background. The Patent Office has not demonstrated why one of skill in the art would be motivated to optimize specificity of the DBL-IBL nucleic acid pairs of Chee *et al.* with orthogonal nucleobases as used by Collins *et al.*

Accordingly, for the reasons explained above, Applicants submit that the instant claims are not obvious over Chee *et al.* in view of Collins *et al.*, and respectfully request that the rejection of Claims 1, 2, 5-7, 9-12 and 21-25 under 35 U.S.C. § 103(a) be withdrawn.

## CONCLUSION

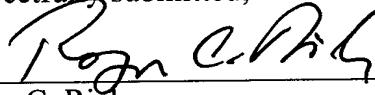
Applicants respectfully request that the foregoing remarks be made of record in the file of the above-identified application.

Applicant submits that the claims as presently pending meet all of the criteria for patentability and are in condition for allowance. Early notification to this effect is earnestly solicited.

No fees, other than those for an extension of time and for filing the enclosed Notice of Appeal, are believed due with this response. However, the Commissioner is authorized to charge any fees under 37 C.F.R. § 1.17, any underpayment of fees, or credit any overpayment Jones Day Deposit Account No. 503013 (order no. 103639-999029) that may be required by this Response.

Respectfully submitted,

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